



A.D. 1834 N^o 6711.

S P E C I F I C A T I O N

OF

DANIEL RUTTER LONG.

PRESERVING ANIMAL FOOD BY MEANS
OF INJECTION.

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Preserving Animal Food by means of Injection.

LONG'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, DANIEL RUTTER LONG, of Bath, in the County of Somerset, Chemist, send greeting.

WHEREAS His present most Excellent Majesty King William the Fourth, by His Letters Patent under the Great Seal of Great Britain, bearing date at
5 Westminster, the Thirteenth day of November, in the fifth year of His reign, did, for Himself, His heirs and successors, give and grant unto me, the said Daniel Rutter Long, His especial license, full power, sole privilege and authority, that I, the said Daniel Rutter Long, my exors, admors, and assigns, or such others as I, the said Daniel Rutter Long, my exors, admors,
10 or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, my Invention of "A NEW MODE OF APPLYING CERTAIN ANTI-PUTRESCENT AND FLAVORING SUBSTANCES TO MEAT;" in which said Letters
15 Patent is contained a proviso that I, the said Daniel Rutter Long, shall cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in His said Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference
20 being thereunto had, will more fully and at large appear.

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NOW KNOW YE, that in compliance with the said proviso, I, the said Daniel Rutter Long, do hereby declare that the nature of my said Invention, and the manner in which the same is to be performed, are particularly described and ascertained in and by the following description thereof, that is to say) :—

My Invention consists in injecting certain anti-putrescent and flavoring preparations into the blood-vessels by means of a force pump. In this way the whole of the animal becomes impregnated instantaneously. I recommend the mouth of pipe leading from the pump to be inserted into the heart, but if that, by any chance, is torn or cut so as to be unfit for it, then inject into the large vessels. I also recommend the operation to be performed as soon as it can after the animal is killed. Kill the animal by striking a blow on the head, or by cutting the throat, according to the class of animal, then turn him on to his right side and thrust the knife into the heart. The incision should be made as near as possible to the breast bone, but not exactly upon it, about an inch to the left of the centre of the bone, and it will pass easily through the cartilage (or gristle) which joins it to each of the ribs. Let the cut be made, if possible, between the ends of the sixth and seventh ribs, and the knife will generally pass into the heart exactly in the spot I recommend to be made for the introduction. When the animal has bled, which he will not appear to do freely, (as the blood remains in the chest), with pigs, I recommend the scalding or burning to be done as quickly as possible, and let him be scraped ; then place him upon his back on a clean bench, and carefully open the chest through the whole length of the blade bone. Be sure not to cut the heart or any of the large vessels. The greatest danger, if any, is near the throat, for, unless the knife goes very cautiously, some of these will be divided, and the injection of the fore part of the body rendered a very tedious operation. Having opened the chest, place a stick between to keep it so, and cautiously open the pericardium (membrane covering the heart), raise the heart with the left hand, turn it a little to the right, and make an incision into the left ventricle, which is the thickest and strongest part of the heart ; let it be made near the point of the heart, and just large enough to admit the pipe of the force pump. If the cut, which was first made after knocking down the animal, should happen to be in the right spot, as is often the case, that will do, or only require enlarging. Having the pump and preparation ready, introduce the pipe two or three inches into the heart and press it round the pipe, then let a man steadily and gently pump, and, having made incisions into the feet and nose, and cut off the tail, you will at all those parts see the liquor ouse out as it is injected. When no more can be injected, which is known by its escaping from the heart, the operation is

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finished, and the animal may be dressed as usual, and allowed to cool; but do not divide him until he has hung some hours, or even till the next day, unless to be consumed. The more the animal is divided of course more fluid escapes—without acting upon the meat. In case of the large blood-vessels being cut or
 5 broken, the liquor is forced into the cavity of the chest and has no effect on the body of the animal; you must then carefully inject the hinder part of the body through the posterior aorta (the pipe passing down by the back bone), and afterwards the upper part of each division of the large vessels, fixing a smaller mouth pipe on to the pipe. In this case, generally speaking, I would not for
 10 small animals recommend an attempt at injecting the fore part, as it would hardly pay the trouble, but to inject the hinder is a most simple and easy process. Where a little care is used in cutting through the breast bone it is hardly possible for the operation to fail, and the whole is equally and thoroughly impregnated and flavored at the will of the operator.

15 The materials I have used, and find to answer, are as follows, but I do not confine myself thereto, as there may be others which are suitable for the purposes. The strongest preparation, No. 1, is for preserving meat at once instead of the usual process of salting; after injecting and the animal is become cold, it may be packed away between layers of salt, and nothing more done
 20 to it.

No. 1.—Four gallons (imperial) of water, eighteen pounds of salt, sixteen pounds of saltpetre; keep these on the fire till the salts are dissolved, then take some from the fire, and, when the hand can be borne in it, inject it; pump the air out of the pump and pipe before inserting the latter in the heart; keep some
 25 of the liquor on the fire to fill up the vessell as it is cooling, for when several animals are to be operated upon it is better not to take all from the fire at once. For curing bacon, and giving the smokey flavour at the same time, add to the above a small quantity of Westphalian liquid; and for flavoring, spices may be boiled with the preparation, and the bacon or beef will exceed the
 30 flavor of any cured the old way.

Preparation No. 2.—Sixteen pounds of salt, four gallons (imperial) water. Where the said color is not required, as for beef, &c. for exportation, No. 2 preparation will answer with packing it with layers of salt between. This also good for meat to keep many weeks hung, and then woked in water and
 35 cooked as fresh meat; a small quantity of saltpetre may be added, if preferred. This preparation, reduced in strength, will preserve meat according to the proportions of water added to it. No. 2 should be calculated, without any other application, to preserve for six weeks; use it cold.

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No. 3.—Two pounds of salt, one imperial gallon of water. This only half the strength of No. 2, and calculated for preserving for two or three weeks; soaking the meat a short time before cooking, and the addition of vinegar to preparations injected, are likely to improve it very much.

In witness whereof, I, the said Daniel Rutter Long, have hereunto 5
set my hand and seal, this Twelfth day of May, in the year of our
Lord One thousand eight hundred and thirty-five.

DANIEL RUTTER (L.S.) LONG.

TROWER.

AND BE IT REMEMBERED, that on Twelfth day of May, in the year
of our Lord 1835, the aforesaid Daniel Rutter Long came before our said 10
Lord the King in His Chancery, and acknowledged the Specification afore-
said, and all and every thing therein contained and specified, in form above
written. And also the Specification aforesaid was stamped according to the
tenor of the Statute made for that purpose.

Inrolled the Thirteenth day of May, in the year of our Lord One 15
thousand eight hundred and thirty-five.

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Printers to the Queen's most Excellent Majesty. 1855.